Basis of preparation for financed emissions

2024

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1.0   Purpose

This document outlines the responsibilities, processes, definitions, boundaries, methodologies and assumptions used in the preparation of Great Southern Bank's annual financed greenhouse gas (GHG) emissions (Scope 3, Category 15) which are published in our Annual Report available at https://www.greatsouthernbank.com.au/about/corporate-governance/annual-reports.

Great Southern Bank own and maintain this document and seek annual input from financed emissions external experts (Anthesis).

2.0   Definitions

Table 1 outlines a list of terms used throughout this basis of preparation and their definitions.

Table 1   Definitions

Metrics	Definition
Total outstanding loans and investments covered ($M)	The outstanding amount of loans and investments in million Australian dollars for each relevant asset class covered by a PCAF methodology.
Total financed emissions (tCO2e)	The sum of borrowers' and investees' Scope 1 and Scope 2 emissions, and any relevant Scope 3 emissions, as defined by the PCAF Standard Part A.
Emissions intensity (tCO2e/$M)	The economic intensity metrics of total financed emissions in tonnes CO2e per million Australian dollars borrowed or invested.
Dollars lent/invested per tonne of emissions generated ($/tCO2e)	An economic emissions intensity metrics that shows the Australian dollars invested or lent per tonne of total financed emissions generated.
Emissions intensity (tCO2e/m2)	Is the physical emissions intensity metrics for mortgages in tonnes CO2e per m2 attributed gross floor plan area.
PCAF Asset class	**Definition**
Mortgages	This asset class includes on-balance sheet loans for specific consumer purposes - namely the purchase and refinance of residential property, including individual homes and multi-family housing with a small number of units. This definition implies that the property is used only for residential purposes and not for commercial activities. This asset class also includes personal overdraft accounts that are secured against property. Although personal overdraft accounts are not material, they have been included as they

	relate to our most material asset class (Mortgages).
Listed Equity and Corporate Bonds (combined with Certificates of Deposit)	This asset class includes all on-balance sheet listed corporate bonds and all on-balance sheet listed equity that are traded on a market and are for general corporate purposes, i.e., unknown use of proceeds as defined by the GHG Protocol.
Motor Vehicle Loans	This asset class refers to on-balance sheet loans and lines of credit to businesses and consumers for specific (corporate or consumer) purposes - namely the finance one or several motor vehicles.
Listed Equity and Corporate Bonds (combined with Corporate Bonds)	This asset class includes all on-balance sheet listed corporate bonds and all on-balance sheet listed equity that are traded on a market and are for general corporate purposes, i.e., unknown use of proceeds as defined by the GHG Protocol.
Sovereign Debt	This asset class includes sovereign bonds and sovereign loans of all maturities issued in domestic or foreign currencies. Both sovereign loans and bonds lead to the transfer of funds to the country, which in turn creates a debt obligation to be repaid by the borrowing country.
Unlisted Equity	Unlisted equity includes all on-balance sheet equity investments to businesses, nonprofits, and any other structure of organisation that are not traded on a market and are for general corporate purposes, i.e., with unknown use of proceeds as defined by the GHG Protocol.
Commercial Loans	Business loans include all on-balance sheet loans and lines of credit to businesses, nonprofits, and any other structure of organisation that are not traded on a market and are for general corporate purposes, i.e., with unknown use of proceeds as defined by the GHG Protocol.

3.0   Reporting boundaries

3.1 Organisational boundary

The Partnership for Carbon Accounting Financials (PCAF) Standard follows the requirements set by the Greenhouse Gas (GHG) Protocol where an organisation shall use either an 'Operational' or 'Financial Control' approach e.g. does the organisation have operational control over another entity.

In line with Great Southern Bank's financial accounting approach to setting organisational boundaries, we use the financial operational control to determine our organisational boundaries for GHG emissions calculations purposes.

Great Southern Bank's main operating entity is Credit Union Australia Ltd ABN 44 087 650 959. It has a number of subsidiary companies, each of which is 100% owned by Credit Union Australia Ltd, which are Credicorp Finance Pty Ltd, Credicorp Insurance Pty Ltd and CUA Management Pty Ltd. All these companies make up Great Southern Bank's organisational boundary and are consolidated in the financed emissions.

For Great Southern Bank this means all our loans and investments (without 'Operational' or 'Financial Control') will be reported under our Scope 3 Category 15 emissions (financed emissions), as defined by the GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard.

3.2 Operational boundary

This defines the operations that constitute an entity for the purpose of accounting GHG emissions. The boundary for Great Southern Bank's financed emissions consists of various assets that we hold as per our balance sheet for the end of the financial year.

It is important to determine whether these assets are in scope as per PCAF Standard definition, where an asset class that falls into one of the PCAF asset classes is considered in scope.

For reporting purposes, PCAF requires to disclose at minimum Scope 1 and 2 emissions of the borrower or investee and sets additional guidelines for Scope 3 emissions for each PCAF asset class. Whether or not these are covered in Great Southern Bank's financed emissions is explained in Section 4 of this document.

Table 2 shows all Great Southern Bank's assets, the correlation with PCAF Standard asset classes, whether a methodology is available and whether these are included or excluded from Great Southern Bank's financed emissions.

For the purposes of the calculation of FY23 financed emissions, overdrafts from our business lending activities have been excluded. These activities relate to 20 accounts and an initial materiality analysis has shown that the value is immaterial.

Table 2   Financed emissions operational boundary by PCAF asset class

Great Southern Bank ID Number	Great Southern Bank internal asset category	Data provided by Great Southern Bank	PCAF asset class as disclosed in the FY24 Annual Report.	Included in inventory (Y/N)
1	Residential Mortgages	Home Lending and Personal Overdraft accounts	Mortgages	Y
2	Commercial Loans	Commercial Lending	Business Loans & Unlisted Equity	Y
		Overdrafts	Business Loans & Unlisted Equity	N
3	Personal Lending	Personal Lending – Motor Vehicles including Staff Car Loans	Motor Vehicle Loans	Y

		Personal Lending – Other	PCAF methodology not available	N
4	Unlisted Equity	Equity Investment	Business Loans & Unlisted Equity	Y
5	Trading and Investment Securities (Treasury)	Corporate Bonds and Certificates of Deposits	Listed Equity and Corporate Bonds	Y
		Sovereign Bonds	Sovereign Debt	Y
6	Personal Overdraft accounts and Credit Cards Receivable	Balance sheet	PCAF methodology not available	N
7	Derivatives	Balance sheet	PCAF methodology not available	N
8	Cash and Cash equivalents	Balance sheet	PCAF methodology not available	N
9	Deposits in other Authorised Deposit Taking Institutes	Balance sheet	PCAF methodology not available	N
10	Other asset classes on balance sheet	Balance sheet	PCAF methodology not available	N

Each year, the PCAF methodology is reviewed to determine if new methodologies are available to allow for the inclusion of additional asset categories.

The value for each in-scope asset category is reconciled using Great Southern Bank's balance sheet. Where there is a variance, values from data provided by Great Southern Bank is used to calculate the financed emissions.

Table 3   Financed emissions operational boundary for in-scope asset categories by dollar value

Great Southern Bank ID number	PCAF Asset Class	Data provided by Great Southern Bank	FY24 values ($m) data provided by Great Southern Bank	FY24 ($m) balance sheet values	Difference ($m)
1	Mortgages	Home Lending	16,413	16,422	-9
2	Commercial Loans	Commercial Lending	50	50	0
3	Motor Vehicle Loans	Personal Lending – Motor Vehicles	136	136	0

4	Unlisted Equity	Equity Investment	69	69	0
5	Listed Equity and Corporate Bonds	Corporate Bonds and Certificates of Deposits	1,777	1,777	0
	Sovereign Debt	Sovereign Bonds	575	575	0
		Total	**19,020**	**19,029**	**-9**

The Mortgages PCAF Asset Class had a variance between the values of the balance sheet and collateral summary provided by the Bank due to the timing of data extraction differing slightly between the two. This variance is within Great Southern Bank's margin of error tolerance.

4.0 Calculation frameworks, methodologies and assumptions

4.1 Frameworks

Great Southern Bank uses the GHG Protocol and PCAF Standard to calculate its financed emissions.

4.1.1 GHG Protocol

Great Southern Bank acknowledges the GHG Protocol as the global set of standards for greenhouse gas accounting that underpins all other greenhouse gas accounting frameworks. It separates greenhouse gas emissions into three categories:

- Scope 1 – direct greenhouse gas emissions,
- Scope 2 –indirect greenhouse gas emissions from the purchase of electricity, and
- Scope 3 – all other indirect greenhouse gas emissions.

For Great Southern Bank, Scope 3 emissions account for the majority of total value chain emissions. Scope 3 Category 15 emissions cover the emissions from our loans and investments (financed emissions).

4.1.2 Partnership for Carbon Accounting Financials

Great Southern Bank acknowledges the global best practice accounting standard that provides for the assessment and disclosure of financed emissions is the PCAF Standard.

The PCAF Standard provides detailed methodological guidance for the measurement and disclosure of financed greenhouse gas emissions associated with seven different asset classes (PCAF Standard Asset Classes):
- Listed Equity and Corporate Bonds
- Business Loans and Unlisted Equity

- Project Finance
- Commercial Real Estate
- Mortgages
- Motor Vehicle Loans
- Sovereign Bonds

By following the methodologies for each PCAF Standard Asset Class, Great Southern Bank measures greenhouse gas emissions for each and produces disclosures that are consistent, comparable, reliable, and clear. Where data for calculating financed emissions is limited, estimated or proxy data are utilised, and the PCAF Standard is used to provide guidance on scoring this data.

4.2 Methodology for calculating financed emissions

Financed emissions are measured for each of the PCAF Standard asset types. The methodology for measuring the financed emissions of each PCAF Standard asset types is based on the PCAF Standard and is explained in detail in Table 4 below.

No methodology is provided by the PCAF Standard for Derivatives, Cash and Cash equivalents, Deposits in other Authorised Deposit taking Institutions (ADIs) or Personal Loans (Other). Accordingly, these assets are excluded from Great Southern Bank's financed emissions.

Table 4 outlines the PCAF Standard methodology used for each asset type.

Table 4 PCAF Standard methodology by asset type

PCAF Standard asset type	PCAF Standard methodology
Mortgages	$$Financed\ emissions = \sum_{b,e} \frac{Outstanding\ amount_b}{Property\ value\ at\ origination_b} \times Energy\ consumption_{b,e} \times Emission\ factor_e$$ (with b = building and e = energy source)

Where A, B and C are defined as follows:

A
- Outstanding amount = portfolioApportionedBal as of 30 June 2024 ($)
- Property value at origination = VALUATION

B
Energy consumption data was sourced from the Australian Energy Regulator by State and Climate Zone where possible: https://www.aer.gov.au/retail-markets/guidelines-reviews/electricity-and-gas-consumption-benchmarks-for-residential-customers-2020.
An average household size of three people (Australian Bureau of Statistics data for 2021 has average household size of 2.55 persons/house).

C
Emission factors for natural gas and electricity were sourced from the latest version of the National Greenhouse Accounts Factors (August 2023) and can be found in the tab 'Emissions Factors': https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-account-factors-2023.pdf

Due to data limitations, additional data manipulation steps are taken.

Scope 3 emissions covered by this financed emissions inventory

PCAF requires financial institutions to disclose Scope 1 and 2 emissions related to the energy use of the property financed through the mortgage. In addition, this financed emissions inventory covers Scope 3 emissions relating to the energy use of the property financed through the mortgage.

Data quality score

All properties are assigned a data quality score of 5 as per this figure from the PCAF Standard Part A: |

$$\sum_{b,e} \frac{Outstanding\ amount_b}{Property\ value\ at\ origination_b} \times Estimated\ energy\ consumption\ from\ statistics_{b,e}$$
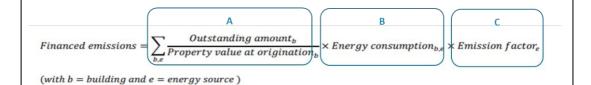$$\times\ Number\ of\ buildings_b \times Average\ emission\ factor_e$$

Score 5

Where" b = building, e = energy source

Commercial Loans

Great Southern Bank's Commercial Loan portfolio includes loans to businesses with proceeds being used for the purchase of properties.

Following PCAF methodology, where the use of proceeds is known, the methodology to estimate financed emissions related to Commercial Loans follows the methodologies of either Residential Mortgage Asset class or Commercial Real Estate Asset class, depending on the Property type. The formula for both Asset classes provided by PCAF is the same and as follows.

$$Financed\ emissions = \sum_b Attribution\ factor_b \times Building\ emissions_b$$

(with b = building)

$$Financed\ emissions = \sum_{b,e} \underbrace{\frac{Outstanding\ amount_b}{Property\ value\ at\ origination_b}}_{A} \times \underbrace{Energy\ consumption_{b,e}}_{B} \times \underbrace{Emission\ factor_e}_{C}$$

(with b = building and e = energy source)

Where A is the Attribution factor, and B and C equate to Building emissions. The following details the definition of each factor used.

Attribution Factor

Calculating the Attribution factor follows the PCAF approach to use the Outstanding amount as Nominator and the Property value at origination as Denominator, as highlighted under A. A is defined as follows:

A
- Outstanding amount = portfolioApportionedBal as of 30 June 2024 ($)
- Property value at origination = VALUATION

Building emissions

Estimating the Building emissions in the Commercial Loans portfolio is split by the property type of the underlying asset as follows, where property type is supplied on collateral level by Corelogic:

1. For property types Farm, House, Flats, Unit, Land or those where property type is unknown or empty, the assumption is that these are private properties. The methodology to estimate building emissions is the same as used for Mortgages, with the following definitions of B and C:

B
Energy consumption data was sourced from the Australian Energy Regulator by State and Climate Zone where possible: https://www.aer.gov.au/retail-markets/guidelines-reviews/electricity-and-gas-consumption-benchmarks-for-residential-customers-2020.

An average household size of three people (Australian Bureau of Statistics data for 2021 has average household size of 2.55 persons/house).

C
Emission factors for natural gas and electricity were sourced from the latest version of the National Greenhouse Accounts Factors (August 2023) and can be found in the tab 'Emissions Factors': https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-account-factors-2023.pdf

Due to data limitations, additional data manipulation steps are taken.

Scope 3 emissions covered by this financed emissions inventory

PCAF requires financial institutions to disclose Scope 1 and 2 emissions related to the energy use of the property financed through the commercial loan. In addition, this financed emissions inventory covers Scope 3 emissions relating to the energy use of property types Farm, House, Flats, Unit, Land or those where property type is unknown or empty.

Due to low data availability, including no available PCAF Emission Factors, Scope 3 emissions for property types Commercial and Business are not estimated.

Data quality score

For property types Commercial and Business, a data quality score of 4 is assigned as per PCAF Standard Part A:

$$\sum_{b,e} \frac{Outstanding\ amount_b}{Property\ value\ at\ origination_b} \times Estimated\ energy\ consumption\ from\ statistics_{b,e} \times Floor\ area_b \times Average\ emission\ factor_e \qquad \text{Score 4}$$

All properties are assigned a data quality score of 5 as per this figure from the PCAF Standard Part A:

	$$\sum_{b,e} \frac{Outstanding\ amount_b}{Property\ value\ at\ origination_b} \times Estimated\ energy\ consumption\ from\ statistics_{b,e}$$ $$\times Number\ of\ buildings_b \times Average\ emission\ factor_e$$	**Score 5**
	Where" b = building, e = energy source	
Motor Vehicle Loans	$$Financed\ emissions = \sum_{v,f} \left(\underbrace{\frac{Outstanding\ amount_v}{Total\ value\ at\ origination_v}}_{A} \right) \times \underbrace{Distance\ travel_v}_{B} \times \underbrace{Efficiency_{v,f} \times Emission\ factor_f}_{C}$$ $$(with\ v = vehicle\ or\ vehicle\ fleet, f = fuel\ type)$$ Where A, B and C are defined as follows: **A** • Outstanding amount • Vehicle value at origination **B** Distance travelled data was sourced from the Survey of Motor Vehicle Use, Australia, 12 months ending 30 June 2020. For Motorcycles, these can be found in the tab 'Assumptions' and for Passenger vehicles these can be found in the tab 'Assumptions MV'. This data is available at https://www.abs.gov.au/statistics/industry/tourism-and-transport/survey-motor-vehicle-use-australia/latest-release. **C** Efficiency for Passenger vehicles where data is available is obtained from the Green Vehicle Guide by vehicle make and model. This data is available at https://www.greenvehicleguide.gov.au/. For Motorcycles and Passenger vehicles where data is not available through the Green Vehicle Guide, the average efficiency (fuel consumption) was sourced from the Survey of Motor Vehicle Use, Australia, 12 months ending 30 June 2020 (Source: Survey of Motor Vehicle Use, Australia, 12 Months ended 30 June 2020	Australian Bureau of Statistics (abs.gov.au)). It is assumed that both vehicles use petrol as fuel. Emission factors were sourced from the latest version of the National Greenhouse Accounts Factors (August 2023): https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-account-factors-2023.pdf These can be found in the tab 'Emissions Factors'. Assumptions are made for the fuel type of each vehicle where the most common fuel type by vehicle make and model is used. An assumption is provided by Great Southern bank that the original approved amount per vehicle equals 95% of the vehicle's value at origination.	

For any accounts opened during the current reporting period, financed emissions are attributed to the period the account was open.

Scope 3 emissions covered by this financed emissions inventory

PCAF requires financial institutions to disclose Scope 1 and 2 emissions of the vehicles being financed, where Scope 1 emissions are direct emissions from fuel combustion of vehicles and Scope 2 emissions are indirect emissions from electricity generation consumed in electric vehicles and hybrid electric vehicles. In addition, this financed emissions inventory covers Scope 3 emissions related to the energy use of the property financed through the mortgage.

Data quality score

All motor vehicle loans with a known vehicle make, model and year are assigned a data quality score of 3 as per this figure from the PCAF Standard Part A:

$$\sum_{v,f} \frac{Outstanding\ amount_v}{Total\ value\ at\ origination_v} \times Distance\ traveled_r \times Efficiency_{v,f} \times Emission\ factor_f \qquad \text{Score 3}$$
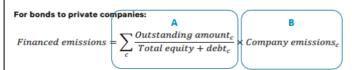
Where: v = vehicle with known make and model, r = regional estimation of distance travelled, f = fuel type
All motor vehicle loans with unknown vehicle make, model and year are assigned a data quality score of 5 as per this figure from the PCAF Standard Part A:

$$\sum_{a,f} \frac{Outstanding\ amount_v}{Total\ value\ at\ origination_v} \times Distance\ traveled_s \times Efficiency_{a,f} \times Emission\ factor_f \qquad \text{Score 5}$$

Where: v = vehicle, s = local or regional estimation of distance travelled a = assumed average vehicle, f = fuel type

Corporate Bonds	For bonds to private companies: $$Financed\ emissions = \underbrace{\sum_c \frac{Outstanding\ amount_c}{Total\ equity + debt_c}}_{A} \times \underbrace{Company\ emissions_c}_{B}$$ Where A and B are defined as follows: **A** - Outstanding amount = Outstanding Amount as of 30 June 2024 ($) - Total equity + debt = total equity and debt of the company Total equity + debt is obtained from the relevant company's annual report. Total equity + debt is used due to data availability of non-publicly traded entities and comparability between these and publicly traded entities. **B** The general principal for data collection is to use latest publicly available data. If possible, company emissions data is obtained from the company's annual or sustainability reports. In line with the GHG Protocol's requirement for a conservative approach, location-based Scope 2 emissions from electricity usage by reporting companies are used in this Financed Emissions Inventory. Where a company has only reported market-based Scope 2 emissions from electricity usage, this number is used. Where this is not possible, company revenue is obtained from a company's

annual report and multiplied by a Revenue emissions factor. For commercial banks, Revenue is the sum of a bank's gross interest income and non-interest or other income.

Revenue emissions factor for Scope 1, 2 and 3 combined, in kgCO2e/$ Revenue, is obtained from an Anthesis data analysis set using IELab Scope 3 GHG emission factors from 2014 for Banking and investments services the emissions factor which was 0.0306kgCO2e/$ Revenue. This emissions factor is adjusted for inflation to 2024, utilising the Reserve Bank's Inflation Calculator by Financial Year (https://www.rba.gov.au/calculator/financialYearDecimal.html). This is split into Scope 1, 2 and 3 emission factors using the average split between the emission scopes from reported emissions from organisations in the Corporate Bonds portfolio.

Scope 3 emissions covered by this financed emissions inventory

PCAF follows a phase-in approach which requires disclosure of Scope 3 emissions from borrowers and investees in the Corporate Bonds asset class from certain sectors. For the purpose of this Financed Emissions Inventory, Scope 3 emissions are included for Corporate Bonds and Certificates of Deposits as data is available from reporting companies.

Data quality score
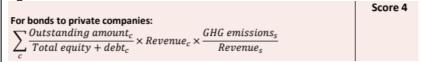
Where entities have publicly reported their verified emissions, data quality score is set to 1 as per this figure from the PCAF Standard Part A:
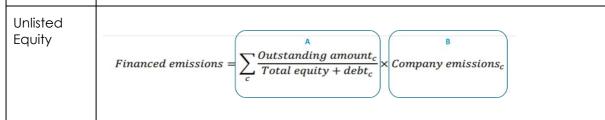
For bonds to private companies: | Score 1
$$\sum_c \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Verified\ company\ emissions_c$$

Where entities publicly reported emissions that are not verified, data quality score is set to 2 as per this figure from the PCAF Standard Part A:

For bonds to private companies: | Score 2
$$\sum_c \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Unverified\ company\ emissions_c$$

Where entities have not reported emissions, data quality score is set to 4 as per this figure from the PCAF Standard Par A:

For bonds to private companies: | Score 4
$$\sum_c \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Revenue_c \times \frac{GHG\ emissions_s}{Revenue_s}$$

For all of which applies the following.
Where c = borrower or investee, s = sector

Unlisted Equity	

$$Financed\ emissions = \underbrace{\sum_c \frac{Outstanding\ amount_c}{Total\ equity + debt_c}}_{A} \times \underbrace{Company\ emissions_c}_{B}$$

Where A and B are defined as follows:

A
- Outstanding amount = Outstanding investment Amount as of 30 June 2024 ($)
- Total Equity + Debt

B
- Company emissions are obtained from public reporting. Where that's not possible, the below actions are undertaken.

$$Company\ revenue\ \times Revenue\ emission\ factor$$

  - Revenue emissions factor for Scope 1, 2 and 3 combined, in kgCO2e/$ Revenue, is obtained from an Anthesis data analysis set using IELab Scope 3 GHG emission factors from 2014 for Banking and investments services. For 2014, the emissions factor was 0.0306kgCO2e/$ Revenue. This emissions factor is adjusted for inflation to 2024, utilising the Reserve Bank's Inflation Calculator by Financial Year (https://www.rba.gov.au/calculator/financialYearDecimal.html). This is split into Scope 1, 2 and 3 emission factors using the average split between the emission scopes from reported emissions from organisations in the Corporate Bonds portfolio.
  - For Mutual Marketplace, company revenue is obtained from company's annual report and multiplied by the Revenue emissions factor.
  - For Constantinople, company revenue is provided and multiplied by the Revenue emissions factor

Scope 3 emissions covered by this financed emissions inventory

PCAF follows a phase-in approach which requires disclosure of Scope 3 emissions from borrowers and investees in the business loans and unlisted equity asset class from certain sectors. For the purpose of this financed emissions inventory, Scope 3 emissions are included based on assumptions used.
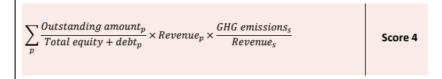
Data quality score

Where entities publicly reported emissions that are not verified, data quality score is set to 2 as per this figure from the PCAF Standard Part A:

For bonds to private companies: $\sum_c \dfrac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Unverified\ company\ emissions_c$	Score 2

Where c = investee

Where outstanding loan amount, equity and debt and revenue are known, data quality score is 4 as per this figure from the PCAF Standard Part A:

$$\sum_{p} \frac{Outstanding\ amount_p}{Total\ equity + debt_p} \times Revenue_p \times \frac{GHG\ emissions_s}{Revenue_s} \qquad \textbf{Score 4}$$

Where p = investee, c = sector

Where outstanding loan amount, equity and debt or revenue are not known, data quality score is 5 as per the PCAF Standard Part A.

Sovereign Debt

Where A and B are defined as follows:

$$Financed\ emissions = \sum_{S} \underbrace{\frac{Outstanding\ amount_s}{PPP\text{-}adjusted\ GDP_s}}_{A} \times \underbrace{Sovereign\ Emissions_s}_{B}$$

(with s=sovereign borrower)

A

- Outstanding amount = Outstanding Amount as of 30 June 2024 ($)
- Purchase Power Parity (PPP) - adjusted GDP data for Commonwealth of Australia (Australia) is obtained from The World Bank's database, available at https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD
- PPP – adjusted GDP by state is calculated using Australia's PPP – adjusted GDP multiplied by each state's attribution to Australia's national GDP.

B

Sovereign Emissions are split into scopes 1, 2 and 3 as follows:

Table 5-17: PCAF scope definition for Sovereign Debt

Scope 1	Scope 2	Scope 3
Domestic GHG emissions from sources located within the country territory *This aligns with the UNFCCC definition of domestic territorial emissions, including emissions from exported goods and services*	GHG emissions occurring as a consequence of the domestic use of grid-supplied electricity, heat, steam and/or cooling which is imported from another territory	Emissions attributable to non-energy imports as a result of activities taking place within the country territory

Scope 1

- Domestic GHG-emissions from sources located within the country territory (Australia):
  - 2022 emissions are by state and obtained from Home | ANGA (climatechange.gov.au). Emissions exclude those from Land Use, Land-Use Change and Forestry UNFCCC (LULUCF).
  - 2023 emissions are at country level and obtained from https://www.dcceew.gov.au/sites/default/files/documents/nggi-quarterly-update-dec-2023.pdf.
- Data from the Quarterly update of Australia's National Greenhouse Gas Inventory from December 2023 is used as Domestic GHG-emissions at a country level for FY24.
- Country level Domestic GHG-emissions for FY24 is extrapolated to state level using the percentage of each state's emissions share in 2022.

- Scope 1 emissions for the purpose of this inventory does not include LULUCF emissions.

Scope 2
- Scope 2 emissions are equal to Import emissions from energy supplies, including grid-supplied electricity, heat, steam and/or cooling.
- For country level emissions, Scope 2 emission factors are sourced from PCAF data base for Sovereign Debt, using OECD 2018 Sovereign debt emission factor by PPP – adjusted GDP in tCO2e/M int. $ and multiplied by FY24 PPP – adjusted GDP for Australia. PCAF Emission Factors were sourced from PCAF database on https://db.carbonaccountingfinancials.com.
- Country level Scope 2 emissions for FY23 are extrapolated to state level are extrapolated to State level using the percentage share of state's GDP in the country's overall GDP.

Scope 3
- Scope 3 emissions are equal to Import emissions from sources other than energy.
- For country level emissions, Scope 3 emission factors are sourced from PCAF data base for Sovereign Debt, using OECD 2018 Sovereign debt emission factor by PPP – adjusted GDP in tCO2e/M int. $ and multiplied by FY24 PPP – adjusted GDP for Australia. PCAF Emission Factors were sourced from PCAF database on https://db.carbonaccountingfinancials.com.
- Country level Scope 3 emissions for FY24 are extrapolated to state level are extrapolated to State level using the percentage share of state's GDP in the country's overall GDP.

Scope 3 emissions covered by this financed emissions inventory

PCAF disclosure of Scope 3 emissions from borrowers and investees in the Sovereign Bonds asset class in line with aforementioned recommended scope definitions. For the purpose of this Financed Emissions Inventory, all scopes are covered in this inventory.

Data quality score

For country level Scope 1 emissions, data quality score is set to 2 as per this figure from the PCAF Standard Part A:

$$\sum_c \frac{Outstanding\ amount_c}{PPP-adjusted\ GDP_c} \times Unverified\ country\ emissions_c \qquad \text{Score 2}$$

Where: c = investee

For all other emissions scopes on country level and all state emissions calculations, data quality score is set to 5 as per this figure from the PCAF Standard Part A:

$$\sum_c \frac{Outstanding\ amount_c}{PPP-adjusted\ GDP_c} \times PPP-adjusted\ GDP_c \times \frac{GHG\ emissions_{proxy}}{PPP-adjusted\ GDP_{proxy}} \qquad \text{Score 5}$$

Where: c = investee, proxy = proxy data

The data quality score for all emissions is weighted by emissions scope.

Back cover

Great Southern Bank